NOTE: The document identifier and heading has been changed on this page to reflect that this is a performance specification. There are no other changes to this document. The document identifier on subsequent pages has not been changed, but will be changed the next time this document is revised.

MIL-PRF-39012/33A
11 January 1973
SUPERSEDING
MIL-C-39012/33
27 February 1967

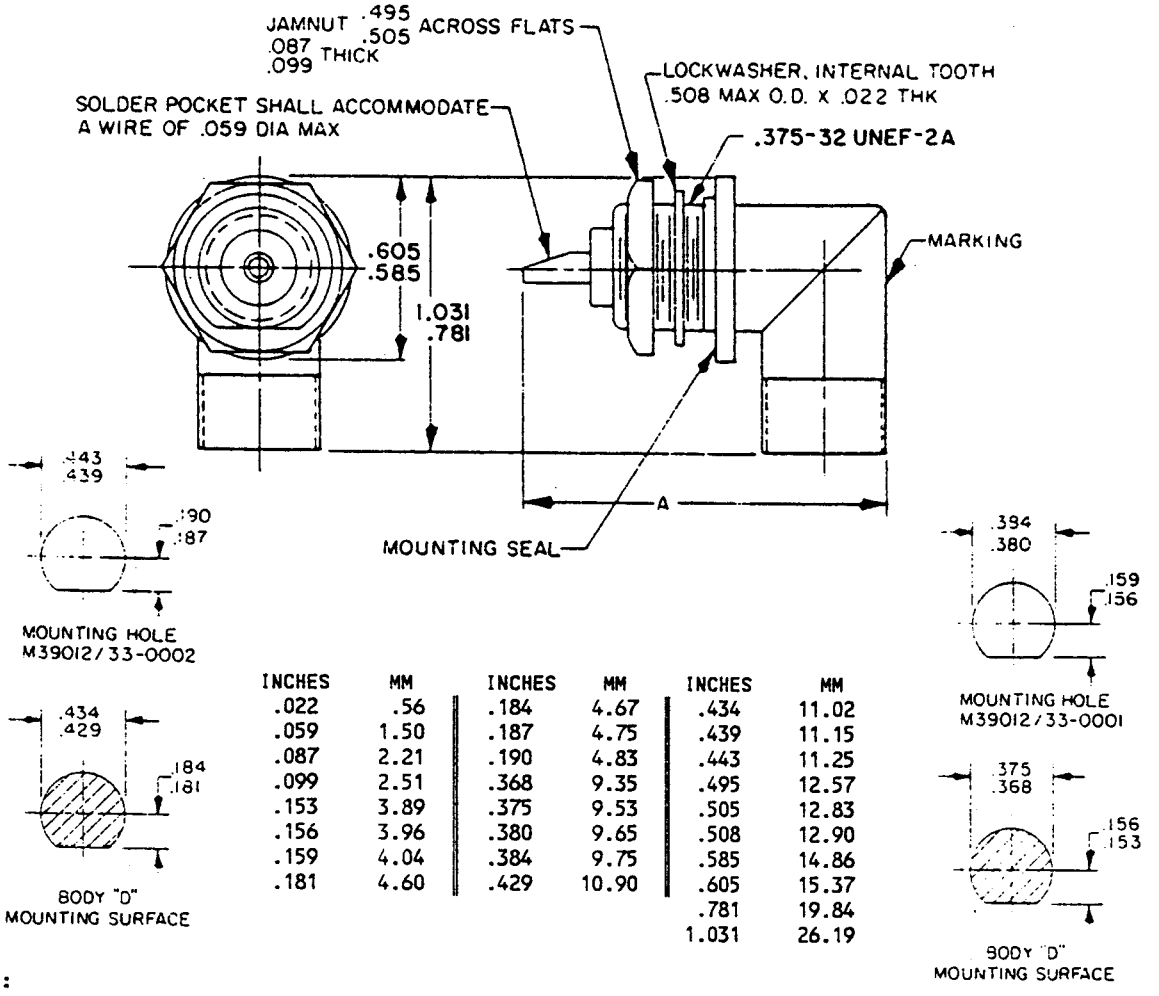
PERFORMANCE SPECIFICATION

CONNECTORS, COAXIAL, RADIO FREQUENCY

(SERIES TNC (UNCABLED - RECEPTACLE, SOCKET, RIGHT ANGLE, CLASS 2)

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The complete requirements for procuring the connectors described herein shall consist of this document and the latest issue of Specification MIL-PRF-39012.



INCHES	MM	INCHES	MM	INCHES	MM
.022	.56	.184	4.67	.434	11.02
.059	1.50	.187	4.75	.439	11.15
.087	2.21	.190	4.83	.443	11.25
.099	2.51	.368	9.35	.495	12.57
.153	3.89	.375	9.53	.505	12.83
.156	3.96	.380	9.65	.508	12.90
.159	4.04	.384	9.75	.585	14.86
.181	4.60	.429	10.90	.605	15.37
				.781	19.84
				1.031	26.19

NOTES:
1. Dimensions are in inches.
2. For dimension A see table I.
3. Metric equivalents (to the nearest .01 mm) are given for general information only and are based upon 1 inch = 25.4 mm.
4. All undimensioned pictoral configurations are for reference purposes only.

FIGURE 1. General configuration.

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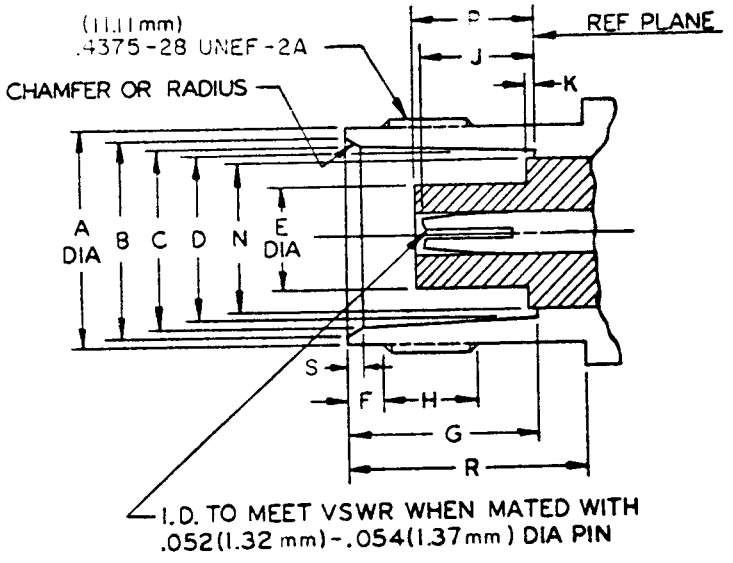
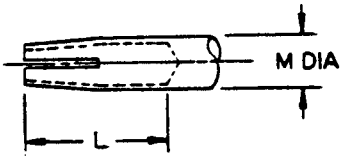


Ltr	Dimensions in inches with metric equivalents (mm) in parentheses	
	Minimum	Maximum
A	.378 (9.60)	.381 (9.68)
B	.345 (8.76)	.356 (9.04)
C	.327 (8.31)	.333 (8.46)
D	.319 (8.10)	.321 (8.15)
E		.186 (4.72)
F	.068 (1.73)	.088 (2.24)
G	.329 (8.36)	.333 (8.46)
H	.187 (4.75)	
J	.186 (4.72)	.206 (5.23)
K		.006 (.15)
L	.195 (4.95)	
M	.081 (2.06)	.087 (2.21)
N		.256 (6.50)
P	.188 (4.78)	.208 (5.28)
R	.415 (10.56)	
S	.015 (.38)	.030 (.76)



*N dimension applies to that portion (if applicable) of the dielectric which protrudes beyond the metal shoulder (or reference plane) by dimension K.

NOTES:
1. Metric equivalents (to the nearest .01 mm) are given for general information only and are based upon 1 inch = 25.4 mm.
2. All undimensioned pictorial configurations are for reference purposes only.

FIGURE 2. Mating dimensions for socket terminations.

TABLE I. Dash number and overall dimensions.

Dash No.	Dim	Inches-millimeters 1/ Maximum	Maximum panel thickness
0001	A	1.500 (38.10)	.250 (6.35)
0002	A	1.359 (34.52)	.125 (3.18)

1/ Millimeters are in parentheses.

TABLE II. Group qualification.

Group	Submission and qualification of any of the following connectors	Qualifies the following connectors
I	0001 0002	0001 0002

ENGINEERING DATA:

Nominal impedance: 50 ohms.

Frequency range: 0 to 11,000 MHz.

Voltage rating: 500 volts rms maximum working voltage at sea level. 125 volts rms maximum at 70,000 feet.

Temperature rating: -65°C to +165°C.

REQUIREMENTS:

Dimensions and configuration: See figure 1.

Force to engage and disengage:
Longitudinal force - Not applicable.
Torque - 2 inch-pounds maximum.

Coupling proof torque:
Not applicable.

Inspection conditions:
Coupling torque - 4 to 6 inch pounds.

Mating characteristics: See figure 2 for dimensions.
Center contact (female):
Oversize test pin - .057 diameter minimum (non-closed entry contacts only).
Insertion depth - .125 minimum.
Number of insertions - 1.

Insertion force test - Steel test pin dia .054 minimum.
Test pin finish - 16 microinches.
Insertion force - 2 pounds maximum.

Withdrawal force test: Steel test pin dia .052 maximum.
Withdrawal force - 2 oz. minimum.
Test pin finish - 16 microinches.

Hermetic seal: Not applicable.

Leakage: Connector mounted in mounting hole specified on figure 1 with mating end capped. Test applicable to mounting seal only. Air pressure - 30 psi.
Duration - 30 seconds minimum.
Applicable to M39012/33-0001 only.

Insulation resistance: Method 302, test condition B, MIL-STD-202. 5,000 megohms minimum.

Center contact retention:
6 lbs minimum axial force.
4 inch-ounces radial torque minimum.

Corrosion (salt spray): Method 101, test condition B, MIL-STD-202.

Voltage standing wave ratio (VSWR):
Not applicable.

Connector durability: 500 cycles at 12 cycles/minute maximum. The connector shall meet the mating characteristics and force to engage and disengage requirements.

Contact resistance: In milliohms maximum.

	Initial	After environment
Center contact	2.0	2.5
Outer contact	.2	Not applicable

Dielectric withstanding voltage: Method 301 of MIL-STD-202. 1,500 rms minimum at sea level.

Vibration, high frequency: Method 204, test condition B, MIL-STD-202.

Shock: Method 213 of MIL-STD-202, test condition I.

Temperature cycling: Method 102, test condition C, MIL-STD-202, except test high temperature shall be +200°C.

Thermal shock: Not applicable.

Moisture resistance: Method 106 of MIL-STD-202. No measurements at high humidity. Insulation resistance shall be at least 200 megohms within 5 minutes after removal from humidity.

Corona level:
Voltage - 375 volts, minimum.
Altitude - 70,000 feet.

RF high potential withstanding voltage:
Voltage and frequency: 1,000 volts rms at 5 MHz.
Leakage current: Not applicable.

Cable retention force: Not applicable.

Coupling mechanism retention force:
Not applicable.

RF leakage: Not applicable.

Insertion loss: Not applicable.

Part number: M39012/33-
(dash number from table I).

Custodians:
Army - EL
Navy - EC
Air Force - 80

Review activities:
Army - MU, MI, EL
Navy - EC
Air Force - 11, 17, 80
DSA - ES

User activities:
Army - AT, AV, ME
Navy - AS, OS
Air Force - 19

Preparing activity:
Army - EL

Agent:
DSA - ES

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